ADDITIONAL PERSONNEL REQUIRED BY NATIONAL SAFETY POLICIES

Executive Analysis of Fire Service Operations in Emergency Management

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ABSTRACT

The problem at hand is that some national safety agencies have created safety regulations that greatly impact Fire Departments.

The purpose of this research paper was to use the descriptive research method and evaluate these national standards. Research questions that were answered are;

- Do the national safety standards mentioned above require more personnel on a fire incident today, as opposed to fifteen years ago?
- If the documents require more personnel, how many more personnel are required?
- How are Fire Departments operating in regards to these documents?
- If the documents require more personnel on scene, how would the Garland Fire Department get these extra personnel on scene?

The procedures of this research followed normal descriptive style research methods. Documents from different agencies were reviewed and articles about the subject matter were reviewed. In addition, a survey was sent to Fire Departments to determine what other Fire Departments are doing in regards to these regulations. A benchmark of a residential house with a first alarm crew was used. Requirements of new safety standards were made against this benchmark, to compare between a fire scene of today and a fire scene fifteen years ago.

The results determined that eight additional personnel are needed on a residential fire scene that was not required fifteen years ago. It was also determined that most Fire

Departments are trying to meet the safety regulations of these agencies. It also determined that Fire Departments are calling additional equipment to fire scenes to meet the regulations, instead of hiring more personnel.

Major recommendations that came out of this research were that Fire Departments should strive to meet all national safety regulations or laws. If possible additional equipment should be called for in lieu of hiring more personnel to comply with new regulations.

TABLE OF CONTENTS

INTRODUCTION

Over the last fifteen years, several safety documents have been introduced that deals with safety on fire incidents. These documents have come from many different sources in the United States. An understanding of the safety laws, recommendations and standards that have been introduced over the last fifteen years is necessary.

A list of the more prominent documents would include the National Fire Protection Agency standard #1500, entitled *Fire Department Occupational Safety and Health Program;* National Fire Protection Agency standard #1561, entitled *Fire Department Incident Management System*; and Occupational Safety and Health Administration 29 CFR 1910.134. 29 CFR 1910. 120 deals with safety requirements on personnel responding to hazardous material incidents.

These documents have dramatically changed the way the fire service deals with safety issues within the fire service in the United States. The documents require, or suggest in some cases, that certain procedures be followed. The documents would apparently require more personnel on scene to safely mitigate the incident. The problem with the situation is how would the Garland Fire Department, as well as other Fire Departments, get the extra personnel on scene that these documents may require?

The purpose of this research paper is to use the descriptive research method to answer several research questions. The questions are:

- Do national safety documents require more personnel on a fire incident as opposed to fifteen years ago?

- If the documents require more personnel, how many more personnel are suggested or required?
- If the documents require more personnel on scene, how would the Garland Fire Department get these additional personnel on scene?
- How are other Fire Departments operating in regards to these safety documents?

BACKGROUND

The United States has one of the worst fire problems in the world. The problem includes one of the highest loss of life, both civilian and firefighter, loss of property as well as a very high apathy or disregard for fire. In 1969, President Nixon focused attention on the fire problem in the United States by establishing the Commission on Fire Prevention and Control. This group established the National Fire Academy, United States Fire Administration, and produced the book *America Burning*. These three items have brought many changes to the fire service in an attempt to offset property damage and the apathy, but mainly to try to reduce firefighter and civilian deaths.

Over the last twenty years, there has been an effort in this Country to make the fire service safer. There have been many laws, standards and recommendations applied to the fire service to accomplish the safer environment. These policies have come from the Occupational Safety and Health Administration (OSHA) 29 CFR 1910, Federal Labor Standards Act (FLSA), Environmental Protection Agency (EPA), National Fire Protection Association (NFPA), and Sate Fire Commissions. These changes are in all phases of the

fire service including equipment, clothing, number of hours worked, and vehicles. Most important of these policies are indications of how safety on fire grounds can be improved. Some of these safety policies deal specifically with personnel staffing on a fire scene, and it is here that a closer study is needed.

As has been mentioned earlier, the National Fire Protection Association (NFPA) standard 1500 (1992) came into effect in 1987, and is entitled *Fire Department Occupational Safety and Health Program*. It is a very encompassing document. Some of the non-fire ground topics are;

- Organization of the Fire Department
- Training and Educational Requirements
- Vehicles including operators, persons riding on apparatus, inspection maintenance and repair of apparatus, tools and equipment carried on apparatus.
- Protective Clothing and Protective Equipment
- Emergency Operations
- Facility Safety
- Medical and Physical well being

NFPA 1500 makes several recommendations specific to personnel staffing. Some of these recommendations are;

- A minimum of 4 personnel to operate each piece of fire apparatus.
- A minimum of 5 personnel for engines in high risk areas.
- A minimum of 6 personnel on ladder trucks.
- Firefighters working inside a structure fire must work in teams of at least two.

- There will be a Rapid Intervention Crew (RIC) for the purpose of rescuing firefighters. The RIC will have a minimum of two personnel assigned to it.
- An Incident Management plan will be followed.
- Rehabilitation of firefighters will take place during incidents.

In 1990, the National Fire Protection Association (NFPA) standard 1561 was introduced. The title of this document is *Fire Department Incident Management System*. Prior to the introduction of an Incident Command System, firefighters essentially operated in an autarchic system. Firefighters would be given a job task to perform. This was usually independently, where he/she remained until the task was completed. After their initial job task was completed, it was very easy for firefighters to roam around the fire ground and freelance doing what they thought needed to be done. This produced an unorganized fire ground with many injuries and deaths.

The Incident Command System is an effort to organize the usual chaotic and unpredictable fire ground. The system establishes an Incident Commander (IC) who makes all decisions and assigns all “teams” to certain tasks. Under the IC would be support staff to assist the IC. Depending on the type incident, there may be a few support staff or a large contingent of staff to assist the management of the incident. Other positions in an Incident Management System besides an Incident Commander could include:

- Planning
- Safety
- Accountability
- Planning
- Logistics

- Operations
- Staging
- Rehabilitation

These are all personnel who assist the management of the incident but do not actually work directly to mitigate the incident.

OSHA 29 CFR 1910.134 (1989) enacted a respiratory law that strengthened portions of NFPA Standard #1500. There are several aspects to this law, but the most important is requiring two personnel on a safety team outside the structure, before an attack can be made inside a structure fire. This in essence means that before an attack can be made on an interior fire, at least four firefighters must be on scene. Fire engines with three personnel, must wait until other firefighters arrive on scene before they can enter the structure to extinguish a fire. If certain conditions exist, the three member team can go ahead and attack the fire. These conditions exist if the fire is in the incipient stages, or if a rescue situation of a civilian exists. Although Texas is not an OSHA State, it is expected that the Environmental Protection Agency (EPA) will adopt these laws, at which time Texas would be required to meet this law.

This is obviously an issue that needs to be researched. These different agencies are requiring more complex safety issues be performed on scene, but these agencies do not offer funding or help to initiate the efforts. More personnel are apparently being required to be on scene, but where do the extra personnel come from? Do we hire more personnel at a cost of millions of dollars and use these personnel some 5% of the time at true working fires? Or do we simply call for more fire apparatus to fill these newly required positions? Some Departments do not have the resources to simply call for more apparatus.

This issue relates to my last EFOP class, Executive Analysis of Fire Service Operations in Emergency Management. This issue was discussed in our class, and most students were unsure how to deal with it. A research of the topic will indicate what is required by the different agencies, what the costs are, and what other Departments are doing to meet the requirements.

LITERARY REVIEW

In the last fifteen years, there has been an increased awareness in safety within the fire service in the United States. There have been many policies written to help curtail the death and injury rate among firefighters. To help make the fire grounds safer, several safety procedures and more positions have been required on fire grounds. To understand what specific requirements have been required, this paper will review several of these national documents.

In 1987, the National Fire Protection Association introduced standard #1500 and revised the document in 1992. This is entitled *Fire Department Occupational Safety and Health Program.* Within this document there were many new “recommendations” made to the fire service. In the preface of the document it says, “This standard is meant to be appropriate for voluntary compliance, as a state-of-the-art document, whether or not it is adopted as a mandatory requirement by an authority having regulatory jurisdiction over a particular organization." Apparently, this document is expected to be adhered to even if the local Chief or City Council does or does not adopt it. Legally, the recommendations of NFPA 1500 are not law per se, until formally adopted by a state or local agency.

This paper concerns itself with additional personnel that have been recently required or recommended by national safety documents. In reviewing these documents, there is some ambiguity as to whether the recommendations are calling for “additional” personnel to be on a fire scene, or if the procedures or functions are to be encompassed in a firefighter's job function that is already on scene. This research paper compared the job function of a firefighter fifteen years ago to the job function of a firefighter today. If fifteen years ago, the safety position was not present, than it is considered a new position and will require an additional person on the fire scene of today.

Paragraph 6-1.2 of NFPA 1500 (1992) says “an incident management system that meets the requirements of NFPA 1561, *Fire Department Incident Management System*, shall be established with written standard operating procedures applying to all members involved in emergency operations."

New Positions

NFPA 1561

NFPA 1561 (1990) is entitled Fire Department Incident Management System makes the following statements and recommendations:

- NFPA 1561 (1990) paragraph 3-1.2 says, “Standard operating procedures shall define the responsibility of one member to assume the role of incident commander from the beginning of operations at the scene of each incident." Although the fire service has historically had a chief in charge, there has not always been an organized approach on the fireground. This meant that whoever was in charge, could be in the fire itself or could be a block over having coffee. In that there are new specific

requirements placed on this individual, for the purposes of this study, the Incident Commander is considered a new or additional person on the fire scene. For the purpose of this study, this position is considered the first new position.

- Paragraph 3-3.2 of NFPA 1561 (1990) says "the incident management system shall include a standard approach for the collection, evaluation, dissemination, and use of information." This is referred to as the planning section. Presently, on a residential fire, this planning activity is being done by the Chief's Aide. Because these positions were not considered a necessity fifteen years ago, the planning person is considered an additional requirement at a residence fire. This position is considered the second new position.
- Paragraph 3-4.1 of NFPA 1561 (1990) says "the logistics components of an incident management system shall include those functions that provide equipment, services, material, and other resources in support of the incident." This is referred to as the logistic section. The logistic function is usually performed on larger fires than on residence fires. Since this paper is using a residence fire as a benchmark, this position will not be added as a new person required on scene.
- Paragraph 3-5.2 of NFPA 1561 (1990) says "the incident commander shall assign intermediate levels of supervision and organize resources following standard operating procedures in accordance with this standard and based on the scale and complexity of operations." This is referred to as the Operations section. For the sake of argument, the Operations section will be considered to have been in place fifteen years ago. Therefore, Operational staff positions will not be added as new positions.

- Paragraph 3-7.1 of NFPA 1561 (1990) says “the incident management system shall provide a standard system to manage reserves of personnel and other resources at or near the scene of the incident.” This is referred to as the staging section. This position is usually not used at a residence fire, therefore it will not be added as a new position.
- Paragraph 3-8.1 of NFPA 1561 (1990) says “the incident management system shall provide for financial services when necessary for the safe conduct of an incident.” This is referred to as the finance section. A financial function is only set up at major incidents. Although this is a new position, it will not be added as a new position to our benchmark fire.

NFPA 1500

- NFPA 1500 (1992) paragraph 6-3.1 says, “the fire department shall establish written standard operating procedures for a personnel accountability system in accordance with section 4-3 of NFPA 1561 and provide for the tracking and inventory of all members operating at an emergency incident. Section 4-3.3 of NFPA 1561 says, “the fire department shall adopt and routinely use a standard personnel identification system to maintain accountability for each member engaged in activities at an incident scene." The accountability section or officer is used at all incidents, and will therefore be added as a new position. This is considered to be the third new position required.
- NFPA 1500 (1992) paragraph 6-4.3 says “members operating in hazardous areas at emergency incidents shall operate in teams of two or more.” This requirement may or may not have been a part of standard operating procedures in fire departments fifteen

years ago. From personal research done, this was an item that was written in most standard operating procedures, but was not followed. In the author's opinion, firefighters, as a rule, worked independently in the past. Therefore, working in teams will add one person to each hose line. On a residence fire this would equate to two additional positions being added as new positions. These positions will add the fourth and fifth newly required positions.

- NFPA 1500 (1992) makes many recommendations concerning safety issues about many different areas in the fire service. Paragraph 2-5.1 says "the fire chief shall appoint a designated fire department safety officer." Although this position has many departmental requirements, acting as the safety officer on the scene of an emergency is normally one of the positions' responsibilities. This position did not exist fifteen years ago. Therefore it is a new position on the fireground, called for by national safety standards. This new position is the sixth new position added.
- NFPA 1500 (1992) Paragraph 6-4.4 says "in the initial stages of an incident where only one team is operating in the hazardous area, at least one additional member shall be assigned to stand by outside of the hazardous area where the team is operating. In paragraph 6-4.4.2, it indicates this standby member may be permitted to perform other tasks such as apparatus operator, incident commander or aide. Paragraph 6-4.4.4 says "once a second team is assigned or operating in the hazardous area, the incident shall no longer be considered in the initial stage, and at least one rapid intervention crew shall be required." Paragraph 6-5.2 says, "a rapid intervention crew shall consist of at least two members." The rapid intervention crew is a new item. This will require two new positions which will be positions seven and eight.

There are many other “recommendations” in NFPA 1500 and NFPA 1561. The other recommendations do not directly relate to on-scene activities, and therefore will not be discussed here.

The new national safety policies require that the specific items be accomplished on a fire ground. It does not say specifically, that a fire chief has to hire more personnel, but in the author’s opinion, having more personnel on scene is required to meet the standards. Although NFPA 1500 (1992) recommends having up to 5 personnel on an engine, and 6 personnel on a truck, the purpose of this paper is limited to determining how many additional personnel are being required on scene. Therefore, the requirement of personnel on apparatus will not be discussed.

S. N. Foley and D. L. Rubin (1993) indicates that the original focus of NFPA 1500 was to develop a document that would be the benchmark or measurement of a comprehensive safety and health program for the fire department. This is in fact what it has become, and more.

Rukavina (1993) suggests there is a national debate about NFPA 1500. Specifically, he suggests that fire departments are concerned about the assembly of four firefighters prior to beginning an attack on a fire. This is an indication that these national safety documents are requiring more personnel on scene than in previous years.

Occupational Safety and Health Administration (OSHA, 1989) has now made requirements as to how many firefighters are needed on scene. The new requirements are in the respiratory section of 29 CFR 1910.134. OSHA has mandated that four firefighters are required on scene before an interior attack of a fire can take place. This is being referred to as two-in/two-out. This language complements NFPA 1500, in requiring four

personnel on scene. OSHA has strengthened what NFPA 1500 said, in that before an attack can be made on a structure fire, four firefighters must be on scene.

Bruno (1998) states;

> The new OSHA regulation does not deal with minimum staffing of fire companies and is only concerned with the deployment of personnel. However, in practical terms, four people are needed to make it work and it's compatible with the National Fire Protection Association 1500 standard, which calls for a team of four firefighters when making interior attack at a structure fire.

His remarks about two-in/two-out indicates that additional personnel are being required by these safety documents. Bruno goes on to say;

> Even though two-in/two-out doesn't deal directly with staffing, the combination of the new OSHA rule and NFPA 1500 can be used as further evidence that two- and three-person fire companies have problems meeting standards and cannot operate as effectively or as safely as companies with four or five firefighters.

It is obvious by what Bruno says, that the thought is that more firefighters are needed on the scene of a residence fire, and that national safety policies are trying to move the fire service in that direction. Earlier in this literature review, it was shown that NFPA 1500 has required two new positions for rapid intervention crews. Although OSHA is also requiring a rescue team outside a structure fire, the new positions have already been accounted for and more positions will not be added.

In a recent survey by Baltic, (1998) it is clear that the two-in/two-out law by OSHA has fire chiefs going in different directions. Baltic indicates that many chiefs support the law and as many think its intrusive. Within the survey it asked if the chief was making changes

in overall staffing, and/or changes to engine company staffing this year. By the mere asking of these questions, it indicates that the new safety documents are requiring additional personnel. The question is where do the extra personnel come from. In the survey results, it mentions that chiefs are hiring new personnel, shifting personnel from other apparatus to engines, calling in off-duty personnel, calling staff personnel to fire scenes, changing automatic aide procedures, and/or calling for mutual aid quicker in attempts to meet the new standards. The point is they are getting more personnel on scene.

In reviewing the writings of others on this subject, it had two effects. In reviewing the actual safety documents, it indicated what is specifically required on today's fire ground. In reviewing the writings of others about this subject, it indicated that this is a concern in the fire service. It also helped to indicate what Fire Departments need to do to comply with the safety documents.

PROCEDURES

This research paper had a premise of determining how many additional personnel have been required by different standards or laws over the last fifteen years. Other desired outcomes were to find out how other Fire Departments are reacting to these requirements and what the costs of the requirement would be.

A thorough understanding of several documents initiated this research. These documents were NFPA standard #1500, NFPA standard #1561, OSHA Respiratory document, CFR 1910.134. Originally CFR 1910.120, which is referred to as *HAZWOPER*,

was included but it dealt mainly with hazardous material incidents. Since the focus of this study was fire related incidents, CFR 1910.120 was not used for statistical data. The purpose of studying these documents was to find out, if, and how many new personnel these documents required on a fire incident.

A survey was produced in this research. The survey was sent to forty-three Metro Fire Departments, relatively close to the population of Garland, Texas. The population ranged from 125,000 in New Haven, Connecticut, to 529,000 in Austin, Texas. The population of Garland, Texas is 205,000. The survey was sent to these Departments because it was felt that with the Cities being mostly medium sized Metro Departments, would likely have similar needs and reactions to the documents.

The forty-three surveys were faxed to other Departments and asked that the survey be faxed back. Of the forty-three surveys sent out, thirty-four (80%) were returned. This very high return rate surprised the author. It is suspected that the ease of being able to fax the survey back, and the relative similarities of the Departments were main reasons for the high return rate. The survey asked five questions and is in Appendix A.

One of the research questions dealt with determining the monetary cost to comply with the new national safety standards. To determine costs the following procedure was used. To have a process that could be repeated, a basic fire benchmark was used. This was a residential house fire that could be controlled by the first alarm companies. A house fire was used because it is the most common full alarm working fire across the country.

It is presumed that when the above documents were written, that Fire Departments did not have the positions spoke of in the documents. Some Departments may have had some of the positions, but it was not the norm. Therefore, this research assumes that the

positions called for in the documents were not available within the first alarm crew. It stands to reason then, that most personnel referred to in the documents would be "additional" personnel and would need to added to the fire scene in some manner.

The number of these "additional" personnel recommended to be on scene were added up and a total arrived. This total was multiplied by the base salary of a recruit plus essentials (uniforms, protective clothing, medical inoculations, etc.). A figure of 26% was added for benefits. The outcome was the total cost to comply with the documents.

The survey was used to consider other ways of complying with the safety standard, without hiring new firefighters.

This process may have been limited by considering only a perspective of a one alarm residential fire, and in the assumption that most personnel recommended were "additional." It could have also been limited because there was just one person's opinion, the author's.

RESULTS

A review of the documents NFPA #1500, #1561, and OSHA's respiratory law, revealed that additional personnel are being required. Eight more personnel are required to be on scene of a residential fire in 1998, than was required in 1983. This is because of new requirements from safety agencies that were not in place in 1983.

The survey revealed the following:

Question One. At what point does your Department implement an incident

Command structure?

- Twenty-eight of the respondents indicated that an Incident management structure is setup on all incidents.
- Five respondents indicated Incidents Management was initiated at first alarm incidents.
- Two answered “other."

Question Two. On a working fire which of the following does your Department actually use?

- Twenty-five respondents indicated Rehab Officers on a working fire.
- All respondents indicated they used an Incident Commander on a working fire.
- Nineteen respondents indicated they used Staging Officers on a working fire.
- Eight respondents indicated they used Planning Offers on a working fire.
- Twenty-eight respondents indicated they are using the 2 in/2 out procedure.
- Twenty-three respondents indicated they are using two person teams.
- Seventeen respondents indicated they are using Accountability Officers on a working fire.
- Eighteen respondents indicated Incident Commanders had aides.
- Eight respondents indicated they are using Logistic Officers on a working fire.
- Thirty respondents indicated they are using Safety Officers on a working fire.
- Twenty-seven respondents indicated they are using a Rapid Intervention Crew on a working fire.
- None of the respondents answered the “other” line.

Question Three. Of the items checked in question 2, do you, (A) use available resources on scene to accomplish the functions, or (B) hire additional personnel so that particular function could be completed?

- All respondents indicated (A) they used available resources on scene to accomplish the functions.
- Nine of the respondents also answered (B) hire additional personnel so that particular function could be completed.

Four respondents indicated in the margin, that they call out staff position to help fill positions.

Question Four. When considering the added requirements of NFPA 1500 and an incident command system, has your total available personnel to actually fight fire, (A) remained the same, (B) gone down, or (C) increased?

- Twenty-one respondents indicated (A) available personnel to actually fight fires had remained the same
- Three respondents indicated (B) available personnel to actually fight fires had gone down.

Ten respondents indicated (C) available personnel to actually fight fires had increased.

Question Five. If your answer to #4 is (B) “gone down”, do you plan to hire more personnel to make up for the loss? Yes or No.

- Of the three respondents who answered “gone down” in question 4, two said they do not plan to hire more personnel to make up for the loss, while one indicated they will hire more personnel.

It is obvious by reading question two, that most medium sized Metro Fire Departments are trying meet the requirements of the safety documents published in the last fifteen years. It is also obvious by reading question three, that they are using available resources to meet the requirements in lieu of hiring new personnel.

Financial Computation

Eight additional personnel are needed on the scene of residential fires than was needed fifteen years ago. The Garland Fire Department has already added two additional personnel to each fire scene. Therefore, this Fire Department needs to add six additional personnel. In the City of Garland, firefighters work a 56 hour week, working 24 hours on duty and 48 hours off duty. For simplification we will assume that only six additional firefighters were needed per shift. This is because, although it is possible, it is not the norm for the Garland Fire Department to have two working fires at the same time. Factoring in that the six firefighters would be needed on each of three shifts, and factoring in vacation and leave time, we would multiply the six firefighters by a factor of 3.77. The result is 22.62, rounded off to 23.

The current salary of a recruit is $32,061. per year. Factor in protective clothing, uniforms, other essentials, hepatitis vaccine and the costs is $36,923. Multiplied by 26% for benefits and the cost is $46,522 for each new firefighter hired. Twenty-three new firefighters would cost $1,070,006 the first year. Therefore, for the Garland Fire Department to meet the personnel safety requirements of the national safety policies, it

would cost the City of Garland $1,070,006 the first year. In the Chief's opinion, this is not economically feasible at this time.

The Garland Fire Department has three or four personnel on each piece of apparatus in the City. Six additional personnel could be put on scene by adding two additional pieces of apparatus. The down side to this is that five of the thirteen pieces of fire apparatus are committed to one scene. As with most other Departments, it would be more feasible to send additional fire apparatus to the scene, than to arbitrarily hire more personnel.

DISCUSSION

In the literature review several documents were addressed. The findings of this research paper followed the opinions of authors in the literature review. Basically, this paper and the literature review indicated that new safety policies have required new personnel on fire scenes.

The requirement of additional personnel on a fire incident was not a surprise, mainly because of all the talk in the fire service about such requirements. In this author's opinion, some of the safety standards could have used some more discussion. I agree with the philosophy of the two-in/two-out concept, but have questions about the timing of when the rapid intervention crew has to be in place.

The survey results were somewhat unexpected. I had expected that question four would be answered with a majority of "gone down." Meaning that the available number of firefighters to actually send into a residential fire had gone down from fifteen years ago. Surprisingly, the vast majority of the respondents said the available personnel had

remained the same. I am assuming the respondents meant after they called for additional fire apparatus to the scene over the initial alarm, the available resources remained the same.

Twenty-eight respondents said they are currently using “two-in/two-out, and twenty-seven said they are using rapid intervention crews. Apparently, a majority of these Departments have already started implementing OSHA’s new respiratory law. This was unexpected to the author.

The implications to the Garland Fire Department and to the fire service as a whole is pretty much the same. More personnel are required on scene. The option to the fire service is to add new personnel to fire apparatus, call for more fire apparatus, or call for staff personnel to assist on a fire scene. The Garland Fire Department will call for additional fire apparatus and also have Training personnel and Inspectors called to fire scenes to assist in the management of the fire scene.

RECOMMENDATIONS

In this research it has been shown that more personnel are needed on today’s fire scenes, than was required fifteen years ago. In the author’s opinion, more research should be done into the area of safety in the Fire Service. We also need to look at who is making the decisions and why they are making those decisions.

In the author’s opinion, Fire Departments should strive to adhere to national standards. This is for the safety of the firefighters, for legal ramifications, and for the morale within the Fire Departments.

In many parts of the Country, there is not a legal option whether OSHA laws will be followed, but in Texas OSHA is not law. In either case the two-in/two-out law of OSHA should be adhered to. Even though there are some questions about the timeliness of a rapid intervention crew, the fire service has not done a good job in the area of safety. As a result, an outside agency has had to come in and tell the fire service how to do our job.

The manner in which these safety requirements are implemented is for each Chief to decide for his/her own jurisdiction. There are a host of variables as to why one Department would do something one way and why another Department would do it another way.

If at all possible, Fire Departments need to meet national safety standards. The first method of complying with requirements of more personnel, should be to send additional fire apparatus to the incident. The second method would be to call in staff personnel to assist on fire incidents. Neither of these methods will help in meeting OSHA's two-in/two-out law. This is because although more personnel are coming, they are not there in time to allow for a timely fire attack. To meet the two-in/two-out law, Fire Departments will have to add personnel to fire apparatus or wait until other fire apparatus arrives on scene.

REFERENCES

Baltic, S. (1998). *Three to get ready, four to Go*. Fire Chief. pp. 44, 46, 48, 50.

Bruno, H. (1998). *OSHA Mandates 2 In/2 Out Operations*. Firehouse. p. 10.

Foley, S. N. & Rubin D. L. (1993). *The Evolution of NFPA 1500*. Firehouse. p. 46.

National Fire Protection Association. (1992). *Fire Department Occupational and Health Program* (Standard 1500). (2nd ed.). Quincy, MA: National Fire Protection Association.

National Fire Protection Association. (1992). *Fire Department Incident Management System* (Standard 1561). Quincy, MA: National Fire Protection Association.

Occupational Safety and Health Administration. (1989*) Federal Register (Vol. 54, No. 42,* 29 CFR 1910). Washington, DC: U. S. Government Printing Office.

Rukavina, J. (1993). *National standards and negligence*. Fire Chief. pp. 19-20.

Walsh, M. K., & Wojcik, K. (1990 February). *Coping With NFPA 1500*. Fire Chief. pp. 44-47.

Appendix A

Fire Department
Chief Danny Grammer
217 N. Fifth St.
Garland, Texas 75040
(972) 205-2250
(972) 205-2703 fax

Metro Chief,

I am writing a paper for the National Fire Academy, and would like to ask you take a minute to answer the following questions related to safety in your Department. Your answers will be greatly appreciated.

1) At what point does your department implement an incident command structure?
   a) all incidents
   b) still alarm
   c) 1st alarm
   d) 2nd alarm
   e) other _____

2) On a working fire which of the following positions does your Department actually use?

_____ rehab officer _____ accountability officer #? _____
_____ incident commander _____ incident commanders aide #? _____
_____ staging officer _____ logistic officer
_____ planning officer _____ safety officer #? _____
_____ 2 in/2 out _____ rapid intervention crew # in crew ? ____
_____ 2 person teams _____ other _____

3) Of the items checked in question 2, do you;
   a) use available resources on scene to accomplish the functions
   b) hire additional personnel so that particular function could be completed

4) When considering the added requirements of NFPA 1500 and an incident command system, has your total available personnel to actually fight fire;
   a) remained the same
   b) gone down
   c) increased

5) If your answer to # 4 is “gone down”, do you plan to hire more personnel to make up for the loss? Yes No N/A

Thanks for your time! When completed please fax to:

Chief Danny Grammer
Garland Fire Department
(972) 205-2703